

ABSTRACT OF THE DISCLOSURE

An optical mode converter has a coupling waveguide and a receiving waveguide. The coupling waveguide has at an input end a first effective refractive index and includes a tapered core of a substantially constant refractive index with a substantially square cross section at the input end, which has a size that tapers down moving away from the input end. The coupling waveguide also has a cladding at least partially surrounding the tapered core. The receiving waveguide has a second effective refractive index at an output end and includes a core of a substantially constant refractive index greater than the refractive index of the tapered core of the coupling waveguide and a cladding at least partially surrounding the core. A side surface of the tapered core of the coupling waveguide is optically in contact, in a coupling portion, with the receiving waveguide so as to allow optical coupling between the coupling waveguide and the receiving waveguide. The refractive index of the tapered core of the coupling waveguide is selected so that the first effective refractive index and the second effective refractive index differ from each other in absolute value less than 30% of the difference between the core refractive index and the effective refractive index of the receiving waveguide.